



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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February 18, 1993

Mr. Harold E. Davis
P. O. Box 903
Salem, Utah 84653

Dear Mr. Davis:

Re: Response Review, Notice of Intention for Large Mining Operation, H. E. Davis and Sons, Henry 1 and 2 Mine, M/023/023, Juab County, Utah

where is this?

The Division has received and completed its review of your response to our initial review document. After reviewing the information, the Division has the following comments which will need to be addressed before tentative approval may be granted. These comments are based on your response letter, which did address the majority of our questions; however, some of the questions require further clarification. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion.

R647-4-105 Maps, Drawings & Photographs

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)

Please provide the Division with a **reclamation treatments map**. The map should identify the following:

- a) those which will not be reclaimed;
- b) those which will be topsoiled and reseeded;
- c) those which will only have fines applied and be fertilized, mulched and reseeded;
- d) compacted areas, such as roads and pads which will be ripped, topsoiled and reseeded; and
- 3) any stream channel reconstruction or rerouting.

The map should be of the same scale as your original map (1"=200').
(HWS,AAG)

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Also, please provide general (before and after) final reclamation cross-sectional diagrams, of the pit areas where steep slopes and highwalls will remain. (HWS)

R647-4-106 Operation Plan

106.3 Estimated acreages disturbed, reclaimed, annually?

Please review and comment on the total acreage figure and itemized breakdown shown on the attached surety estimate. These values were arrived at by digitizing the map provided with your latest response. If these acreage figures are wrong, please let us know. (AAG)

R647-4-109 Impact Assessment

109.4 Slope stability, erosion control, air quality, safety

Have you obtained a permit from the state Division of Air Quality for fugitive emissions, or dust generation at the mine site? (HWS)

R647-4-110 Reclamation Plan

110.5 Revegetation planting program

How will areas that will not be retopsoiled be revegetated? (e.g. areas where fines are to be applied). The Division suggests applying hay mulch at the rate of 2,000 lbs/acre, and fertilizer at the rate of 200 lbs diammonium phosphate (18-46-9) per acre. (HWS)

R647-4-111 Reclamation Practices

111.1.15 Constructing berms/fences above highwalls

Berms or other safety features may be required at final reclamation if the pit highwalls will be accessible to the public. Please provide additional information regarding the question of public access to the pit highwalls after mining ceases. (AAG)

111.7 Highwalls stabilized at 45 degrees or less

The pit highwalls are proposed to be left at an angle of approximately 73 degrees at final reclamation. The highwalls will have a 10 foot wide bench every 30 vertical feet {see VARIANCE section for further comments} (AAG)

111.9 Dams & impoundments left self draining & stable

The sediment impoundment on the private property is not described in any of the reclamation practices. It is assumed that this impoundment will not be reclaimed at the end of mining operations. Please confirm this assumption. (AAG)

R647-4-112 Variance

A variance for pit highwalls has been requested for highwalls having an overall slope steeper than 45 degrees. The overall highwall slope will be 73 degrees. The justification presented is essentially that existing pit highwalls of approximately 40 vertical feet have remained stable for over 8 years. No quantitative information is provided; however, on January 26, 1993, a site inspection was performed by Holland Shepherd of the Minerals staff. Mr. Shepherd observed the older and newer highwalls at the site and observed no obvious signs of instability (slides or slumping). The operator has also committed to reduce the vertical slope of the pre-law, north facing highwall to 73 degrees, at the end of mining. The Division will grant the variance request. (AAG)

A variance for allowing the sediment impoundment to remain unreclaimed is implied in this response. A variance for allowing the impoundment to remain will be granted, provided it has an acceptable postmine use. A written statement from the landowner requesting that it remain will also be required. (AAG)

The operator needs to evaluate the reclamation plan for the site and request a variance for any portion which will not be reclaimed. This would include those portions of the highwall where no revegetation is to take place. Justification for the variance must also be provided/explained.

R647-4-113 Surety

A draft surety estimate prepared by the Division is attached. Certain assumptions

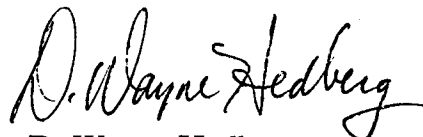
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were made in calculating the estimate. The areas used in the estimate were found by digitizing map 5B. This estimate is largely based on the reclamation treatments proposed in the latest response. The draft estimate may need adjusting when the reclamation plan is finalized. Please comment on the accuracy of the assumptions made and the acreage figures used in this draft estimate.

The surety estimate provided in your last response was assumed to apply only to the 1.5 acres reclaimed in 1992. Please clarify or confirm this. (AAG)

Thank you for your cooperation and patience in finalizing this permitting action. Please contact Holland Shepherd or Tony Gallegos of my staff, if you have further questions in this regard.

Sincerely,



D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment
cc: Thomas Shore, Manti-LaSal National Forest
Lowell Braxton, DOGM
M023023.rvw

RECLAMATION ESTIMATE

H.E. Davis & Sons, Inc.

Henry #1 & #2 Mine

M/023/023

last revision

02/11/93

Juab County

Prepared by Utah State Division of Oil, Gas & Mining

Reclamation Details

- All structures & equipment to be removed from the mine site
- All stockpile pads, facility areas & new roads to be ripped, seeded, mulched
- All trash & debris removed from site
- Quarry benches/highwalls left at ~ 73 degree (VARIANCE)
- Sediment pond to have a postmine use (VARIANCE)
- Waste fines of -1/2" size spread on pit benches & floor (~ 2 ft deep)
- ASSUME 70% of total pit area will be covered with waste fines
- Entire disturbed area, including topsoil stockpiles, to be broadcast seeded
- All drillholes not mined must be plugged according to DOGM rules
- Salvaged topsoil will be placed back on the original salvage area
- ACREAGES: sed. pond 0.5, waste 0.4, ore 0.3, facilities 0.5,
- north road 0.2, south road 0.1, pit 4.6, 1992 reclaimed 1.4
- Estimated total disturbed acreage = 8.0 acre

Activity	Amount	\$/unit	\$
Regrade sed pond (VARIANCE)	0.5 acre	218	0
Place 2 ft of fines on floor & benches	4.2 acre	2,100	8,820
Rip: stockpiles, roads, facilities	1.5 acre	495	743
Grading pit perimeter topsoil-EST	1.0 acre	327	327
General regrading/block access	2 acre	327	654
Broadcast seeding	8 acre	200	1,600
Hay mulch @ 2,000 lb/acre	8 acre	140	1,120
Remove trash & debris	8 acre	100	800
Plug drill holes	1 sum	500	500
Regrade/protect drainage-ESTIMATE	600 LF	2	1,200
Mobilization	3 equip	1,000	3,000
Subtotal			18,764
Add 10% contingency			1,876
1993-\$ Subtotal			20,640
Add 5 yr escalation at 1.27%			1,344
Total 1998-\$			21,984
Rounded Total in 1998-\$			\$22,000
Average cost per acre =			\$2,750